



10/584018

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CULLEN & CO.

— Patent & Trade Mark Attorneys —

11 May 2005

By facsimile

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20
SWITZERLAND

Dear Colleagues,

Re: International Patent Application No. PCT/AU2004/001800
Title: Glycosaminoglycan (GAG) Mimetics
Applicant: Progen Industries Limited
Our Ref: 031392PC/KF

We refer to the International Search Report and Written Opinion.

On behalf of the applicant, we wish to file claim amendments under Article 19, specifically:

Claims 1 and 2 are amended;

Claims 3-14 are unchanged.

We enclose new pages 51-53 containing claims 1-14 with the above changes.

Yours sincerely,
CULLEN & CO.

KEN FINNEY

TB

Enc. New claims

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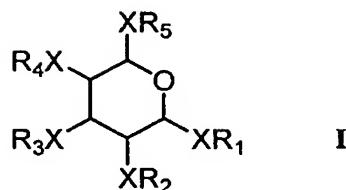
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CLAIMS

1. A compound of the formula



wherein:

each X is independently CH_2 , $\text{C}(\text{O})$, N, O, S, $\text{S}(\text{O})$, $\text{S}(\text{O})_2$, or is a bond; and

each of R_1 to R_5 is independently a bond or is selected from the group consisting of:

hydrogen;

halogen;

azide;

an R group defined as C1 to C8 alkyl or alkenyl, aryl or heteroaryl optionally further substituted by:

an alkoxy, aryl, heteroaryl or aryloxy group;

$-\text{COOH}$, $-\text{S}(\text{O})_2\text{OH}$, phosphate, carboxylate or tetrazolyl;

$-\text{S}(\text{O})_2\text{OH}$, $-\text{S}(\text{O})\text{OH}$, $-\text{S}(\text{O})\text{R}$, $\text{S}(\text{O})_2\text{R}$, $-\text{S}(\text{O})_2\text{NH}_2$, $-\text{S}(\text{O})_2\text{OR}$,

$-\text{S}(\text{O})\text{OR}$;

$-\text{C}(\text{O})\text{R}$;

phosphate, carboxylate or tetrazolyl;

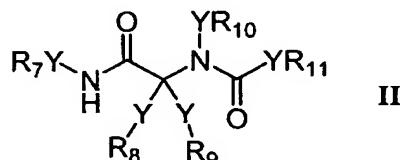
an unsubstituted or substituted heterocyclic group, wherein the substitution is by:

an alkyl or aryl group, $-\text{CH}_2\text{NHC}(\text{O})\text{R}$, $-\text{CH}_2\text{N}(\text{C}(\text{O})\text{R})_2$, $-\text{CH}_2\text{OR}$,

wherein R is as defined above;

connected to a different R_1 to R_5 to form a new cyclic group;

a substructure based upon a group of the following formula:



wherein:

Y is H, R or $-\text{C}(\text{O})\text{R}$, wherein R is as defined above;

at least one, but not more than two of R₇ to R₁₁ is independently a structure according to formula I; or

a structure comprising a second unit according to formula II linked via a "Y" group wherein each unit is independently substituted by R₇ to R₁₀;

with the provisos that:

when R₁ is -CH₃, -S(O)₂OH or -H at least one of R₂ to R₅ is not -H or -S(O)₂OH;

when a substructure of type II is not present and none of R₁-R₅ form an anhydro bridge, no more than two of R₁-R₅ are -S(O)₂OH and the stereochemistry of I is not gluco or galacto;

2. A compound according to claim 1, wherein said compound is PG2024, PG2037, PG2173, PG2198, as hereinbefore described.
3. A compound according to claim 1, wherein said compound is any one of the compounds of Tables 1-4 of the description.
4. A pharmaceutical or veterinary composition for the prevention or treatment in a mammalian subject of a disorder resulting from angiogenesis, metastasis, inflammation, coagulation, thrombosis, and/or microbial infection, which composition comprises at least one compound according to claim 1 together with a pharmaceutically or veterinarily acceptable carrier or diluent for said at least one compound.
5. The composition according to claim 4 which further includes a pharmaceutically or veterinarily acceptable excipient, buffer, stabiliser, isotonicising agent, preservative or antioxidant.
6. The composition according to claim 4, wherein said compound is present therein as an ester, a free acid or base, a hydrate, or a prodrug.
7. Use of a compound according to claim 1 in the manufacture of a medicament for the prevention or treatment in a mammalian subject of a disorder resulting from angiogenesis, metastasis, inflammation, coagulation, thrombosis, and/or microbial infection.
8. The use according to claim 7, wherein said mammalian subject is a human subject.
9. A method for the prevention or treatment in a mammalian subject of a disorder resulting from angiogenesis, metastasis, inflammation, coagulation, thrombosis, and/or microbial infection, which method comprises administering to the subject an effective amount of at least one compound according to claim 1, or a composition comprising said at least one compound.

10. The method according to claim 9 wherein said mammalian subject is a human subject.
11. The method according to claim 9, wherein said disorder resulting from angiogenesis is a proliferative retinopathy or angiogenesis resulting from the growth of a solid tumour.
12. The method according to claim 9, wherein said disorder resulting from inflammation is rheumatoid arthritis, multiple sclerosis, inflammatory bowel disease, allograft rejection or chronic asthma.
13. The method according to claim 9, wherein said disorder resulting from coagulation and/or thrombosis is deep venous thrombosis, pulmonary embolism, thrombotic stroke, peripheral arterial thrombosis, unstable angina or myocardial infarction.
14. The method according to claim 9, wherein said disorder resulting from viral infection is Herpes Simplex.

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